



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

002792

K10003
Job Sheet 175173



Part No: K10003

Job Qty: 4 ea

Part Name: Saddles



Part Weight: 0 lbs

Status: Scheduled

Priority: Medium

Job Created: 3/28/18

Job Tracking No:

Due Date: 4/20/18

Created By: Marie Lajeunesse

Type: SOLD

Description:

Note: DWG REV H IPP: I 03.01.16 Reformat: Incorporated D205-641-011 KJ/RF IPP : J 06-07-25 As per DSI 9344
JLM IPP : K 06.11.17 Per K10003 Rev C KJ IPP : L 07.01.12 Document Record for copying bluefile rmv KJ
IPP Rev: M 08-08-12 now @ chg 006 (DSI 9418) DD verified: IPP N 09.01.27 DSI 9418 rev B EC verified: DD
IPP Rev: O 11.03.11 per dsi9536 DD verf: EC IPP REV: P 12.01.23 AS PER ECN11-684 VERF: EC

Ship Via:

Bill of Materials

Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard		Workcenter/Supplier		Sign-off
					Setup hrs	Run Hrs	Workcenter / Supplier	Lead Time	
90	Start up Operation	4 Ea	4/20/18	4/20/18	0.00	0.00	Start Up Stores/Pkg-1		APR 25 2018
110	Packaging	4 pcs	4/20/18	4/20/18	0.00	0.00	Packaging1-5		APR 25 2018
120	QC	4 pcs	4/20/18	4/20/18	0.00	0.00	QC4		
125	DC	4 pcs	4/20/18	4/20/18	0.00	0.00	DC		DAS
130	Packaging	4 pcs	4/20/18	4/20/18	0.00	0.00	Packaging3-2		58
140	QC21-FG	4 Ea	4/20/18	4/20/18	0.00	0.00	QC21		9-89

Part Op Descriptions: 125 - Create White labels only per PPP K10003

APR 30 2018

Job BOM

Part / Item	Component Name	Quantity	Operation	Container
AN4-51A	Bolt	32 Ea (8 ea)	90-Start up Operation	5044185
AN4-6A	Bolt	64 Ea (16 ea)	90-Start up Operation	5044186
AN4C46A	Bolt	16 Ea (4 ea)	90-Start up Operation	5006303
AN6-12A	Bolt	32 Ea (8 ea)	90-Start up Operation	5041107
D2570	Bushing	96 Ea (24 ea)	90-Start up Operation	5050169
D2571	Saddle, Fwd, Out	4 Ea (1 ea)	90-Start up Operation	5045111
D2572	Saddle, Fwd, In	4 Ea (1 ea)	90-Start up Operation	5045909
D2573	Saddle, Aft, Out	4 Ea (1 ea)	90-Start up Operation	5046939 x 1 5061546 x 3
D2574	Saddle, Aft, In	4 Ea (1 ea)	90-Start up Operation	5058309
D2747	Set Screw	16 Ea (4 ea)	90-Start up Operation	5031307
D2876	Saddle Spacer	8 Ea (2 ea)	90-Start up Operation	5051517
D2877	Saddle Spacer	8 Ea (2 ea)	90-Start up Operation	5053543
D3405-041	Ground Handling Lug	4 Ea (1 ea)	90-Start up Operation	5049451 x 2 5049488 x 2
D3405-043	Ground Handling Lug	4 Ea (1 ea)	90-Start up Operation	5049490
D3407-041	Tow Ring	4 Ea (1 ea)	90-Start up Operation	5054979
D3417-5	Washer	8 Ea (2 ea)	90-Start up Operation	5059523
D3456-1	Washer	4 Ea (1 ea)	90-Start up Operation	5050328
D3533-1	Set Screw	8 Ea (2 ea)	90-Start up Operation	5019132
MS21042L4	Nut	96 Ea (24 ea)	90-Start up Operation	5058050 5054418
MS21043-4	Nut	20 Ea (5 ea)	90-Start up Operation	5045908 503808
NAS1149D0463J	Washer	128 Ea (32 ea)	90-Start up Operation	5024477 504584

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐																																																									
Date : _____		Step #: _____		LOTY Effective : _____		MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval																																																					
DART AEROSPACE Container No: S065063 Part: K10003 Job No: 175173 Serial No/Batch: S065063 Revision: _____ Inspector: _____ DART Aerospace Ltd. 1270 Aberdeen Street Hawkesbury, ON K6A 1K7 CANADA TEL.: 1 813 632-5200 Email: sales@dartaero.com www.dartaerospace.com																																																											
<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th colspan="4" style="text-align: left; padding: 5px;">Root Cause</th> </tr> <tr> <td style="width:15%; text-align: center;">Environment</td> <td style="width:15%;">☐</td> <td style="width:15%; text-align: center;">No Re-veri</td> <td style="width:15%;">☐</td> </tr> <tr> <td style="text-align: center;">Design</td> <td>☐</td> <td style="text-align: center;">Operator</td> <td>☐</td> </tr> <tr> <td style="text-align: center;">Doc/Data</td> <td>☐</td> <td style="text-align: center;">Offset/Seti</td> <td>☐</td> </tr> <tr> <td style="text-align: center;">Equip/Tooling</td> <td>☐</td> <td style="text-align: center;">Supplier</td> <td>☐</td> </tr> <tr> <td style="text-align: center;">Handling/Pre</td> <td>☐</td> <td style="text-align: center;">Training</td> <td>☐</td> </tr> <tr> <td style="text-align: center;">Material</td> <td>☐</td> <td style="text-align: center;">Use for Testing</td> <td>☐</td> </tr> <tr> <td style="text-align: center;">Internal Transport</td> <td>☐</td> <td style="text-align: center;">Poor Information</td> <td>☐</td> </tr> <tr> <td style="text-align: center;">Tribal Knowledge</td> <td>☐</td> <td style="text-align: center;">Rushing</td> <td>☐</td> </tr> <tr> <td style="text-align: center;">LOA</td> <td>☐</td> <td style="text-align: center;">Product Improvement</td> <td>☐</td> </tr> <tr> <td style="text-align: center;">Substation</td> <td>☐</td> <td style="text-align: center;">Process Improvement</td> <td>☐</td> </tr> <tr> <td style="text-align: center;">Past Expiry Date</td> <td>☐</td> <td style="text-align: center;">Manufacturing Process</td> <td>☐</td> </tr> <tr> <td style="text-align: center;">Misidentified</td> <td>☐</td> <td style="text-align: center;">Past Due</td> <td>☐</td> </tr> </table>								Root Cause				Environment	☐	No Re-veri	☐	Design	☐	Operator	☐	Doc/Data	☐	Offset/Seti	☐	Equip/Tooling	☐	Supplier	☐	Handling/Pre	☐	Training	☐	Material	☐	Use for Testing	☐	Internal Transport	☐	Poor Information	☐	Tribal Knowledge	☐	Rushing	☐	LOA	☐	Product Improvement	☐	Substation	☐	Process Improvement	☐	Past Expiry Date	☐	Manufacturing Process	☐	Misidentified	☐	Past Due	☐
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OTHER : _____																																																											

Job Allocations

Operation	Component Part	Required	Inventory	Allocated
90-Start up Operation	AN4-51A	32	358	0
	AN4-6A	64	1,076	0
	AN4C46A	16	194	0
	AN6-12A	32	301	0
	D2570	96	807	0
	D2571	4	17	0
	D2572	4	14	0
	D2573	4	9	0
	D2574	4	5	0
	D2747	16	334	0
	D2876	8	33	0
	D2877	8	52	0
	D3405-041	4	39	0
	D3405-043	4	40	0
	D3407-041	4	29	0
	D3417-5	8	35	0
	D3456-1	4	104	0
	D3533-1	8	210	0
	MS21042L4	96	3,072	0
	MS21043-4	20	603	0
	NAS1149D0463J	128	3,056	0
	NAS1149D0663J	32	1,453	0

Part Specifications

Specifications could not be found.

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE



QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____							
Misidentified ☐	Past Due ☐								

5.0 PARTS LIST

5.1 Skidtube Installations with Standard Wearshoes

Item	634 -011	634 -015	634 -041	634 -045	634 -047	641 -011	Part Number	Description
	X						D205-634-011	SKIDTUBE INSTALLATION (STANDARD)
		X					D205-634-015	SKIDTUBE INSTALLATION (MODIFIED)
1			X				D205-634-041	SKIDTUBE
		1		X			D205-634-045	SKIDTUBE
					X		D205-634-047	WEARSHOE KIT
1	1	1				X	D205-641-011	GROUND HANDLING KIT
1			1				D2580-041	205 SKIDTUBE ASSEMBLY (STANDARD)
1				1			D2580-045	205 SKIDTUBE ASSEMBLY (MODIFIED)
2A			16	16			D2594-1	* PLUG
2B			16	16			D2594-3	* O-RING
3			1	1			D2855	* AFT CAP
4			2	2			AN3-5A	* BOLT
5			2	2			NAS1149D0332J	* WASHER (AN960JD10L)
6A			1	1	1		D3564-9	* WEARSHOE (REPLACES D2577-1)
7A			1	1	1		D3564-11	* WEARSHOE (REPLACES D2577-3)
8A			1	1	1		D3564-5	* WEARSHOE (REPLACES D2577-5)
9A			1	1	1		D3564-13	* WEARSHOE
10			50	50	50		AN3C4A	* BOLT (REPLACES AN3-4A)
11			50	50	50		NAS1149C0332R	* WASHER (AN960C10L)
12			50	50			ALS4-1032-130	* INSERT
13			2	2			ALS4-1032-225	* INSERT
20	1	1					D2571	SADDLE, FWD OUTSIDE
21	1	1					D2572	SADDLE, FWD INSIDE
22	1	1					D2573	SADDLE, AFT OUTSIDE
23	1	1					D2574	SADDLE, AFT INSIDE
24	8	8					AN4-51A	BOLT
25	16	16					D2570	BUSHINGS
26	8	8					MS21042L4	NUT (OR MS21042-4)
27	8	8					AN6-12A	BOLT
28	8	8					NAS1149D0668J	WASHER (AN960JD616)
29	16	16					AN4-6A	BOLT
30	32	32					NAS1149D0463J	WASHER (AN960JD416)
31	16	16					MS21042L4	NUT (OR MS21042-4)
32	4	4					D2747	SET SCREW
33	2	2					D3533-1	SET SCREW
40	1	1					D3407-041	TOW RING (REPLACES D2968-041)
41	1	1					D3456-1	WASHER
43	1	1					MS21043-4	NUT
44	2	2					D3417-5	WASHER
50						1	D3405-041	LUG ASSEMBLY (REPLACES D2736-1)
51						1	D3405-043	LUG ASSEMBLY (REPLACES D2736-3)
52						4	AN4C46A	BOLT
53						8	D2570	BUSHING
54						4	MS21043-4	NUT (OR MS21042-4)
60	2	2					D2876	SADDLE SPACER
61	2	2					D2877	SADDLE SPACER

*DENOTES THAT PART IS INCLUDED WITH D2580-041/-045 ASSEMBLY ABOVE